

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Applicant:	Daniel J. McGurran et al.	Examiner:	Sheeba Ahmed
Serial No.:	09/872,532	Group Art Unit:	1794
Filed:	June 1, 2001	Docket No.:	M120.221.101 / 56763US002
Due Date:	January 28, 2008		
Title:	COLOR STABLE PIGMENTED POLYMERIC FILMS HAVING DYES FOR COLOR ADJUSTMENT		

REPLY BRIEF TO EXAMINER'S ANSWER
TO THE BOARD OF PATENT APPEALS AND INTERFERENCES

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Reply Brief Under 37 C.F.R. §41.41

This Reply Brief is responsive to the Examiner's Answer mailed November 28, 2007, and supports the Notice of Appeal filed on May 25, 2007 appealing from the final rejection dated February 28, 2007 of claims 1, 2, 10, 11, 13-19, and 21-27 of the above-identified application. Eighteen claims remain for consideration.

The U.S. Patent and Trademark Office is hereby authorized to charge required fees or credits due to Deposit Account No. 50-0471 at any time during the pendency of this application.

ARGUMENT

All arguments presented in Appellant's Brief are incorporated by reference herein. Further, Appellant responds to the Examiner's Answer as follows.

I. Withdrawn Rejections

Appellant notes with appreciation the Examiner's withdrawal of the rejection of claims 1, 2, 10, 11, 13-19, and 21-27 under 35 U.S.C. §112, second paragraph.

II. Independent Claim 1 is Allowable Over Enniss

The Examiner's Answer references both Enniss '158 Publication and Enniss '551 Patent in rejecting the pending claims. Enniss '158 Publication is in effect a continuation of Enniss '551 Patent application. The following arguments thus collectively refer to Enniss '158 Publication and Enniss '551 Patent simply as "Enniss".

Appellant's Appeal Brief clarified that the disclosure of Enniss is in direct opposition to the pending claims in that Enniss starts with a dyed film layer to create a near-desired color, and then adjusts this color with pigmented adhesive in creating a visually additive effect. In contrast, with the present application, as embodied for example by claim 1, a pigmented polymer serves as the starting color point, followed by adjustment of the color via addition of a small amount of dye. The Examiner's Answer does not dispute this explanation. Instead, the Examiner's Answer appears to assert that the disclosed films of Enniss structurally meet the claimed optical bodies or window films. Appellant respectfully disagrees for all reasons set forth in Appellant's Appeal Brief, and for at least the following, additional reasons.

A. The Dyed Film of Enniss is Structurally Different From the Pigmented Optical Body of Claim 1

Enniss desires to improve upon gray-toned transparent films produced by suitable dyeing of the film substrates using the necessary proportions of red, blue, and yellow organic dyes. *Enniss '551 Patent, col. 1, ll. 33-36.* In other words, Enniss seeks to slightly modify

conventional gray-toned films created via dye coloring. According to Enniss, the yellow dye component of the conventional dye composition is susceptible to light degradation. Thus, Enniss discloses reducing the amount of yellow dye used in initially forming the dyed, gray-toned film. *Enniss '551 Patent at col. 1, ll. 36-51*. To compensate for the reduction in the amount of this one dye component, Enniss adds a pigmented color-matching layer. The majority of conventional dye components and amounts used in creating a gray-toned dyed film continue to be utilized in the films of Enniss; this fact, in turn, dictates that the resultant structure, while being more light stable than conventional dye-based colored films, is still less light stable, and thus represents a different structure, as compared to pigment-based optical bodies such as those encompassed by claim 1.

The differing structures represented by the optical body of claim 1 as compared to the dye-based color films of Enniss are exemplified by a comparison of color stability data. For example, FIG. 7 of Enniss illustrates color stability in terms of changing b* color scale over time as a function of exposure to a xenon arc lam. As shown, after approximately 2100 hours of exposure time, the b* value has decreased from approximately 7 units to less than 1 unit. In contrast, and as shown in FIG. 4B of the pending application, the b* value of an optical film in accordance with claim 1 has increased only by approximately 3 units after 2000 hours exposure time. Thus, the color stabilities associated with the films of Enniss as compared to pigmented optical bodies of claim 1 are different, confirming that the structures must also be different. As such, the invention of claim 1 whereby a small amount of dye is added to a pigment-based polymer does entail a distinctive structural difference as compared to the dye-based films of Enniss. Therefore, Enniss does not teach or reasonably make obvious the features of claim 1 such that claim 1 is allowable over Enniss.

B. The Amount of Pigment Added to the Dyed Film of Enniss is Not Directly Related to the Blocking Desired

In rejecting claim 1, the Examiner's Answer asserts that one of skill would have arrived at the optical body of claim 1 upon reviewing Enniss because:

They [Enniss] clearly teach how to use dyes and pigments in the same film, how to produce films having low haze, etc. ... The amount of pigment and dye would be directly related to the blocking desired.

Appellant respectfully disagrees. The amount of pigment associated with the films of Enniss is solely a function of the dye component omitted from the base dye composition. Once again, Enniss starts with a conventional gray film dye formula, and removes a portion of one dye (i.e., yellow) viewed as being less light stable. The separately-provided pigment layer is formulated as a direct function of the "reduced" dye component. In other words, while the dye components of Enniss are directly related to the "blocking desired," the amount of pigment is not; rather, the amount of pigment is only directly related to the dye color deficiency of the base formulation. Given this apparent flaw in the Examiner's reasoning, it is respectfully submitted that one of skill would not understand to adjust the transmitted color associated with a pigment polymer using a dye. Thus, claim 1 is not made obvious by Enniss.

C. Enniss Does Not Teach a Dispersed Particulate Pigment That Imparts a Substantial Transmitted Color

Claim 1 clarifies a structural distinction between a pigment-based optical body and the dye-based film of Enniss. In particular, claim 1 recites that a particulate pigment is dispersed within a thermoplastic polymer material, with the dispersed particulate pigment imparting a substantial transmitted color to the optical body. The dye additive is only sufficient to adjust the transmitted color of the optical body to a substantially neutral gray. That is to say, the particulate pigment generates the substantial transmitted color of the optical body. In contrast, Enniss discloses that the dyes create the substantial transmitted color to the film, with the pigment layer adjusting this color. In light of these discrete differences, claim 1 is not made obvious Enniss.

III. Independent Claim 14

A. Enniss Does Not Disclose Sufficient Pigment to Produce a Tint

Independent claim 14 recites a pigmented optical body having a layer of thermoplastic polymer material having dispersed therein a particulate pigment in an amount effective to produce a tint perceptible to an observer. As described above, then, the optical body of claim 14 is pigment-based in direct contrast to the dye-based films of Enniss. While Enniss may add a separate, pigment layer to compensate for a reduced dye component (as compared to the conventional base dye formulation Enniss seeks to modify), it is respectfully submitted that due to the fact that the dyes of Enniss are selected to generate the perceptible tint, the separate pigment layer does not. Thus, claim 14 is allowable over Enniss.

B. The Dyes of Enniss Do Not Adjust the Color of the Optical Body by No More Than 15 Units of b*

The optical body of claim 14 effectively incorporates a pigment to generate a tinted optical body having a color nearly approximating an end color desired. Claim 14 further recites a dye component that adjusts this color, including adjusting the color by no more than 15 units of b*. Thus, because Enniss starts with a dyed film, the dyes are associated with this film inherently create a transmitted color of more than 15 units b*. In fact, Example 1 of Enniss makes clear that the b* value of the dyed film is greater than 15 units b*. Thus, independent claim 14 is further allowable over Enniss.

IV. Dependent Claim 16

Claim 16 depends from claim 14 and recites that the optical body has an a* value and a b* value in the range of -1.5 +/- 1. As set forth in Appellant's Appeal Brief, nothing in Enniss teaches or suggests corresponding a* or b* values. The Examiner's Answer, at page 8, addresses this distinction by referencing Example 1 of Enniss as allegedly showing "a film having a* and b* values within the values of -5 to 5." It is respectfully submitted that regardless of whether the Examiner's assertion is correct, it does not relate to the claimed values of claim 16. The

recitation in claim 16 of “-1.5 +/- 1” is not the same as “-5 to 5.” Further, Example 1 of Enniss provides an a* value (i.e., -3.96) and a b* value (i.e., -4.9) that are both outside of the values of claim 16. Thus, claim 16 recites additionally allowable subject matter.

V. Independent Claim 26

Independent claim 26 recites a carbon black pigmented material to which a blue dye is added in an amount to adjust the transmitted color of the window film to a substantially neutral gray. As set forth in Appellant's Appeal Brief, nothing in Enniss teaches or reasonably makes obvious use of carbon black pigment. In response, the Examiner's Answer references Marks and Oliver to show “that carbon black is conventionally used in optical films as a pigment resulting in a gray film.” Appellant does not dispute that carbon black is known and useful in optical films. However, it is respectfully submitted that in the context of the Enniss films, one of skill would not consider the use of carbon black. Once again, Enniss describes reducing or omitting yellow dye from the conventional composition of a dye-based colored transparent film. To compensate for the reduced or removed yellow dye, Enniss incorporates a separate pigmented layer. Thus, Enniss does not disclose to one of skill the use of any possible pigment as apparently advanced in the Examiner's Answer; instead, Enniss is effectively limited to a pigment layer that compensates for the omission of yellow dye from a conventional dye-based color film.

Given the above, Enniss describes red iron oxide as the pigment useful for compensating for the reduction of yellow dye. Thus, because Enniss does not teach or reasonably make obvious the use of carbon black in compensating for a yellow color deficiency in an otherwise gray-toned, dye-based film, claim 26 is allowable over the cited art.

VI. Independent Claim 27

Independent claim 27 is allowable over the cited art for at least the reasons provided above with respect to claim 26. In addition, it is noted that claim 27 recites a window film consisting essentially of a polymer material having dispersed therein a carbon black particulate

Appellant's Reply Brief to Examiner's Answer to the Board of Patent Appeals and Interferences

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pigment and a blue dye. Enniss discloses the use of multiple dyes in creating a gray-toned film (to which a color-matching pigment layer is added to satisfy the color deficiency of the dyed-film). In other words, one of skill would understand Enniss to require more than only a blue dye; a blue dye alone could not generate a gray-toned composite film described in Enniss. Thus, claim 27 is allowable over the cited art.

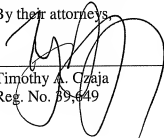
CONCLUSION

Any inquiry regarding this Reply Brief to the Board of Patent Appeals and Interferences of the United States Patent and Trademark Office should be directed to David Patchett at Telephone No. (651) 736-4713, Facsimile No. (651) 736-6133 or Timothy A. Czaja at Telephone No. (612) 573-2004, Facsimile No. (612) 573-2005. In addition, all correspondence should continue to be directed to the following address:

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Respectfully submitted,
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TAC:jms



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